

FIG. 1

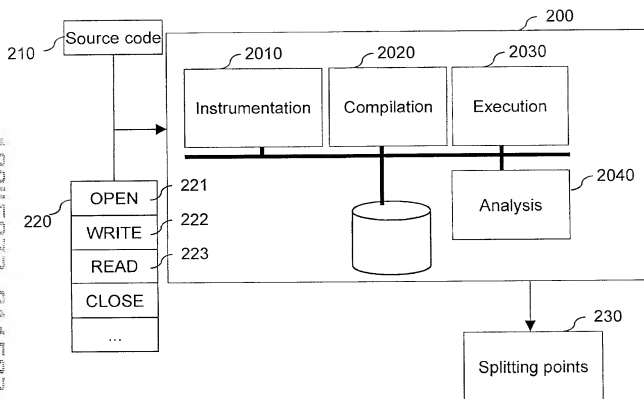


FIG. 2

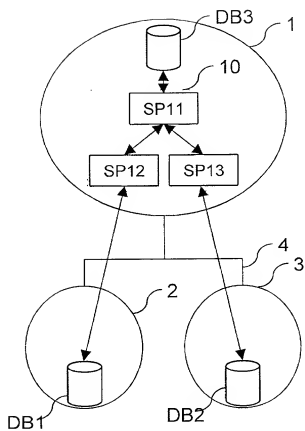


FIG. 3a

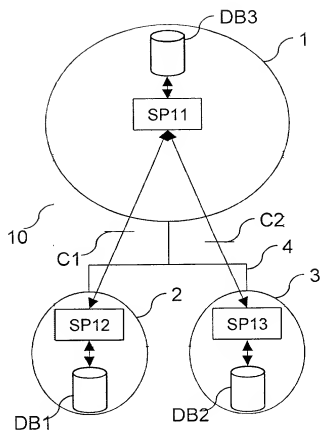


FIG. 3b

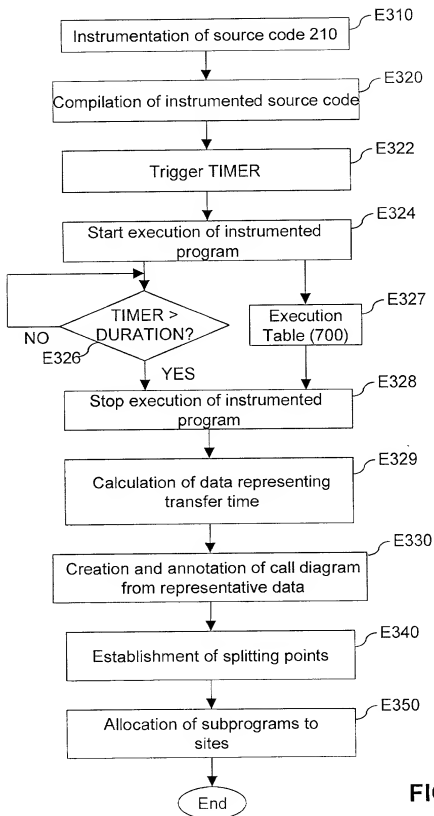


FIG. 4

```

void SP11
{
    string STR_TEMP;
    L411 → STR_TEMP = SP12(3, "example");
    L412 → OPEN(DB3)
    L413 → WRITE(STR_TEMP, DB3);
    ...
}

string SP12(integer N, string STR1)
{
    string STR2;
    L414 → OPEN(DB1);
    L415 → WRITE(STR1, DB1);
    L416 → STR2=READ(DB1);
    ...
    L417 → return STR2;
}

```

FIG. 5a

```

void SP11
{
    string STR_TEMP;
    L421 → SP_CALLER ← STACK;
    L422 → INC_CALLS(SP_CALLER, SP11)
    L411 → STR_TEMP=SP12(3, "example");
    L423 → XOP(DB3);
    L424 → XWRT(STR_TEMP, DB1);
    ...
}

string SP12(integer N, string STR1)
{
    string STR2;
    L421 → SP_CALLER ← STACK;
    L422 → INC_CALLS(SP_CALLER, SP12)
    L425 → TOTAL(SP_CALLER, SP12,
               QE=sizeOf(N) + strlen(STR1), INPUT);
    L426 → XOP(DB1);
    L427 → XWRT(STR1, DB1);
    L428 → STR2=XRD(DB1);
    L429 → TOTAL(SP_CALLER, SP12,
               QS = strlen(STR2), OUTPUT);
    L417 → return STR2;
}

```

FIG. 5b

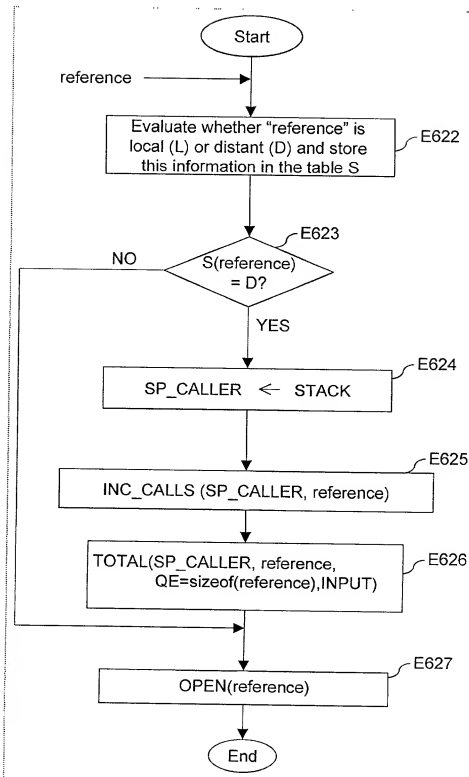


FIG. 6a

Database	Local/Distant	S
DB3	L	
DB1	D	901
		902

FIG. 6b

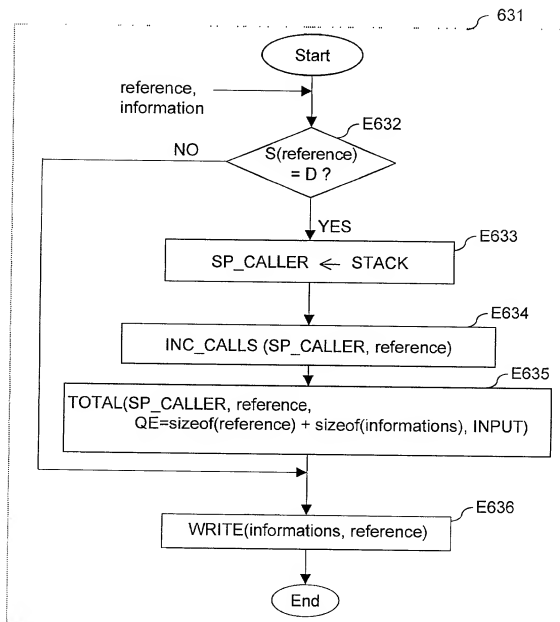


FIG. 6c

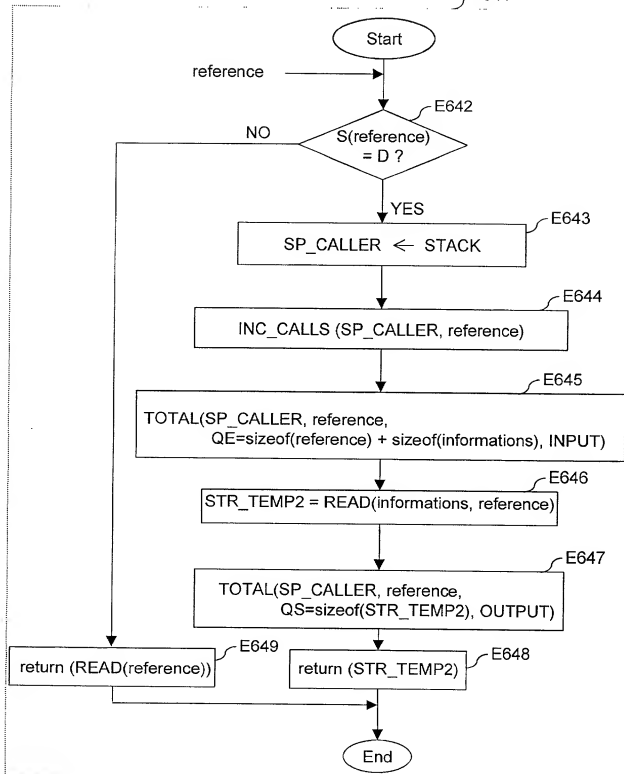


FIG. 6d

Calling Subprogram	Called Subprogram	Number of calls	700		
			Quantity of information transferred from caller to called (bytes)	Quantity of information transferred from called to caller (bytes)	Sum of transfer times (secs)
SP11	SP12	1	11	13	0.0524
SP12	DB1	3	16	13	0.1587
			INPUT OUTPUT		
			710 720		

FIG. 7a

205110' E205100T

700'

Calling Subprogram	Called Subprogram	Number of calls	Quantity of information transferred from caller to called (bytes)	Quantity of information transferred from called to caller (bytes)	Sum of transfer times (secs)
SP1	SP2	300	5,000	45,000	20
SP1	SP3	550	5,000	20,000	30
SP2	SP4	18	800	200	1
SP2	SP5	1600	5,000	150,000	100
SP3	SP9	150	8,000	17,000	10
SP3	SP20	95	500	2,000	5
SP4	SP6	190	2,000	3,000	10
SP5	SP7	1500	1,000	249,000	100
SP5	SP8	90	1,000	4,000	5
SP6	DB1	350	16,000	9,000	20
SP7	DB1	150	5,000	20,000	10
SP8	DB1	900	15,000	35,000	50
SP9	DB1	50	500	24,500	5
SP9	DB2	350	5,000	20,000	20
SP20	DB2	1500	5,000	245,000	100

731

732

INPUT OUTPUT

FIG. 7b

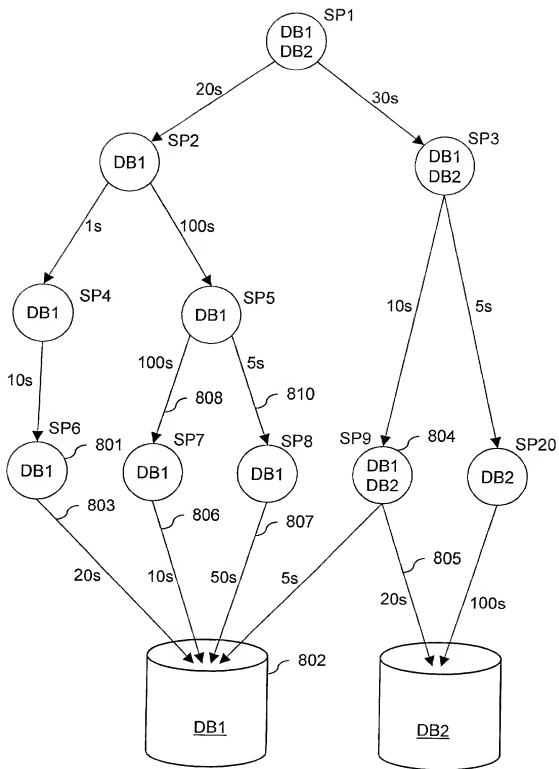


FIG. 8

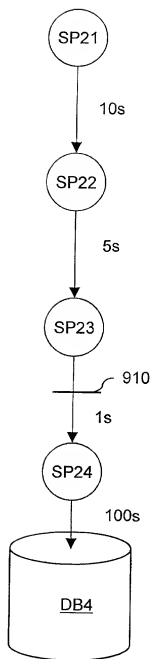


FIG. 9a

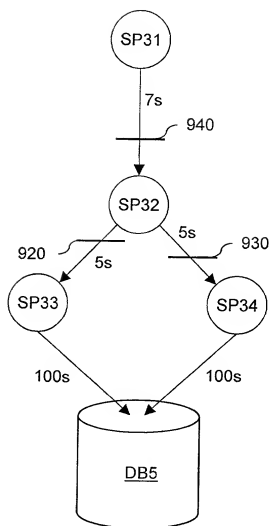


FIG. 9b

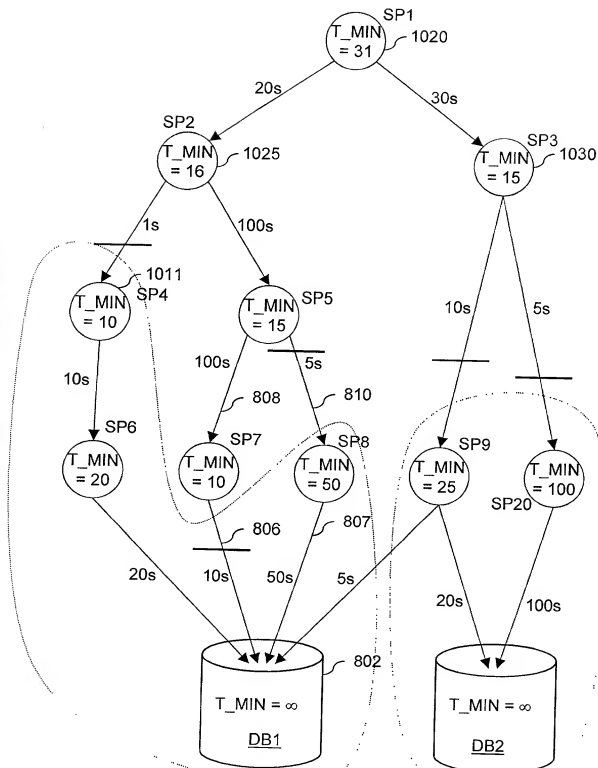


FIG. 10

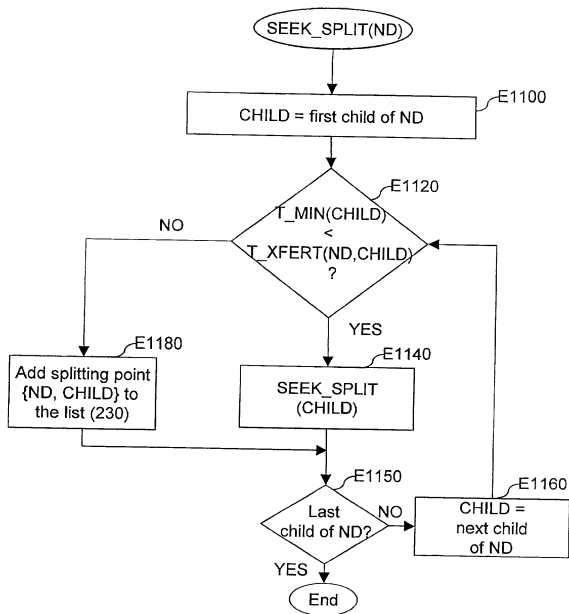


FIG. 11

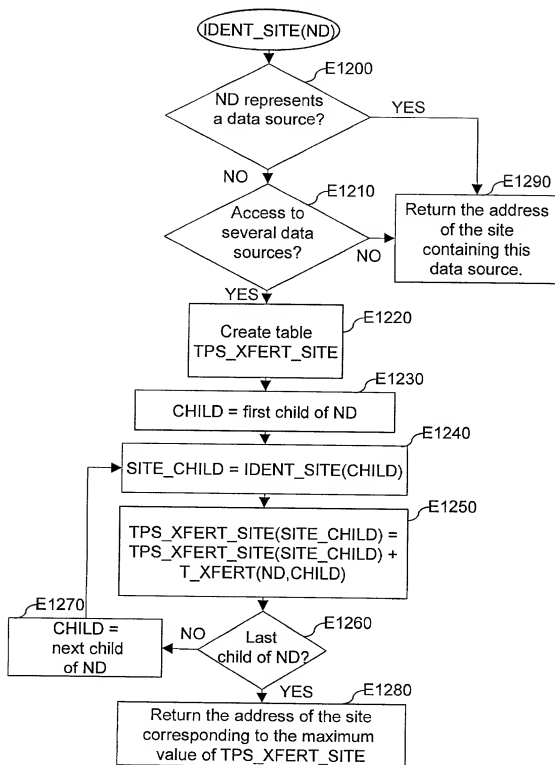


FIG. 12